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NO. 20.



"Our Home, our Country, and our Brother Man."

For the Maine Farmer.

SUGAR FROM CORNSTALKS.

Mr. Editor:—Some years since, I saw a long communication from some one, on the subject of making sugar from cornstalks. It appears to me, that it was in a pamphlet issued from some of the departments at Washington. It gave the amount of sugar, I think, on an acre of corn stalks, as being very large, but for some cause I have heard nothing of it since, probably because sweetening has been so low, but now we have to pay ruinous prices for sugar and molasses in Upper Georgia, so that I have a strong desire to go into it and make my own at any rate. Any information through the Farmer, or any other way will be thankfully received.

If you have the data, please refresh my memory as to the quantity in an acre of heavy stalks, modus operandi of making the sugar, also where a cheap machine can be obtained to extract the juice from the stalk—wanted to use the ensuing fall. If we can make it grow here, where corn stalks grow as large as my wrist, and commonly about ten feet high, I think it would save us a great expense, and make a great demand for machines.

I want the machine to apply to water or horse power.

ALVIN ARMSTRONG.

Dutton, Ga., April 7, 1856.

NOTE: That the common Indian corn stalk, while green, and before the ear has grown to much size, contains a large quantity of saccharine matter, has been known probably as long as corn or maize itself has been known. But no very definite experiments were made, in this country, at least, until Mr. William Webb, of Wilmington, in the State of Delaware, commenced, about the year 1841 or '42, to see whether a good crystallizable sugar could be obtained from corn stalks. After many trials, he at length succeeded beyond his expectations in not only obtaining sugar, but a greater amount of it than he anticipated. He made his discoveries known in pamphlets published at the time, and also communicated the facts to Hon. H. L. Ellsworth, then Commissioner of Patents, who embodied, not only Mr. Webb's communication, but those from several others on the subject, in the report from the Patent Office for 1842 and '43.

It is there stated by Mr. Webb that the raw juice of maize marks ten degrees on the saccharometer, (an instrument to note the density of cane juice, and consequently the proportion of sugar contained,) while the average of cane juice is not higher than eight degrees, and beet juice not over three degrees.

From 91 quarts of the maize juice (beet measure) he obtained 4 lbs. 6 oz. of syrup, concentrated to the point suitable for crystallization, and he states that the portion of crystallizable sugar appears to be larger than is obtained from cane juice in Louisiana.

From the trials on a small scale, he calculated that it would yield from 800 to 1000 lbs. to the acre. This is probably too much; but he contends that on the average the juices of corn are as rich as those of cane, and the weight of green produce at least equal.

Mr. Webb stated that from his experiments he felt warranted in saying:

1st. It has been satisfactorily proved that sugar of an excellent quality, suitable for common use without refining, may be made from the stalks of maize.

2d. The juice of this plant, when cultivated in a certain manner, contains saccharine matter remarkably free from foreign substances.

3d. He then gives the following directions as best for raising the stalks for the purpose of extracting sugar from them.

Select for seed the largest and best ears of any variety not disposed to throw up suckers, or spread out in branches. That kind most productive in the neighborhood will be generally the best adapted to the purpose. The planting should be done with a drill machine. One man with a pair of horses and an instrument of this kind, will plant and cover in the most perfect manner from ten to twelve acres per day. The rows (which ought to run north and south) two and a half feet apart, and the seed dropped sufficiently thick in the row to ensure a plant every two or three inches. A large harrow, made with teeth so as not to injure the corn, may be used to advantage after the corn is up. The after culture may be done in the usual way with cultivator or horse hoe.

The next operation is taking off the ears.—(The ripening of the ears uses up the sugar in the stalk, changing it into the starch of the kernel.) Many stalks will not produce any ears, but whenever they appear they must be removed. It is not best to undertake this work too early; for, when the ears first appear they are tender, and cannot be taken off without breaking, which increases the trouble. Any time before the formation of grain upon them will be soon enough.

Nothing further is necessary to be done until the crop is ready to be cut for grinding. In Delaware, the cutting may commence with the earlier varieties about the middle of August. The later kinds will be ripe in September, and continue in season until cut off by frost. The top and blades of the stalk should be cut off in the field, as these contain no sugar. They are then cut, tied in bundles, and taken to the mill. The top and blades may be cured for fodder, and the residue or pomace of the stalks, after being ground and pressed, may be dried and used for the same purpose.

The mills may be made on the principle of those for grinding cane, but as the cornstalk is more tender than that of the cane, the mill need not be made so strong.

Three upright rollers, from 20 to 40 inches in length, are turned so as to run true and even, and fitted into a strong frame work consisting of two horizontal pieces sustained by uprights. These pieces are morticed so as to admit wedges on each side of the pivots of the two outside rollers, by which their distance from the middle one may be regulated.

The power is applied by a sweep or other means to the middle roller, and the others are moved by it by coggs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of frame work called the dumb returner, which directs them backwards, so that they pass thro' the rollers again, on the opposite side of the middle one.

The modern improved machine is made entirely of iron, three horizontal rollers arranged in a triangle, one above and two below. The cane or stalk passes directly through, receiving two pressures before it escapes. The lower cylinders are contained in a small cylinder which receives the juice.

The juice, after coming from the mill, is allowed to stand a short time to deposit some of its coarser impurities. It is then poured off, and passed through a flannel strainer, in order to get rid of such matters as can be separated in this way. Lime-water, called milk of lime, is then added in the proportion of one or two table spoonfuls to the gallon; sometimes more is required and sometimes less.

The juice is then placed upon the fire, and brought nearly to the boiling point, when it is carefully skimmed—taking care to complete the operation before the boiling commences. It is then boiled down rapidly, removing the scum as it arises.

The juice is examined from time to time, and if there is any appearance of feculent matter which would not rise to the surface, it is again passed through a flannel strainer. In judging when the syrup is sufficiently boiled, a portion is taken between the thumb and finger, and if, when moderately cool, a thread half an inch long can be drawn, and the thread held in the air, and poured into broad, shallow vessels to crystallize. In some cases crystallization commences in 12 hours, and in others not till several days, and in no case does it progress so far as to allow the sugar to be drained in less than three weeks from the time of boiling.

We have thus made a brief abstract of the pamphlet published by Mr. Webb. If friend Armstrong should succeed in his corn stalk sugar manufactory, we hope he will send us a little of the molasses, that we may drink his health in a mug of switchel, made from Maine Mountain water and Georgia corn stalk syrup.

EDITOR.

PREPARE FOR ROOT CROPS.

We can raise in every section of Maine, all, or nearly all the esculent roots that are cultivated for man or beast, and in ordinary seasons they grow to perfection. This being a fact, it is not a little surprising that we do not raise double, nay, four fold as many as we do.

As it is, not half of our farmers raise enough to feed their cattle during the winter. Indeed, some are so stubbornly prejudiced that they will not raise any at all for their cattle and sheep, keeping them through our long winter on nothing but hay and water. Now we all know that by having a plenty of good hay and water, stock will do well, but with a generous feed also of roots, such as turnips, ruta baga, potatoes, carrots or beets, once a day, they will do much better. Now is the time to prepare for raising a good crop. It is well to lay out the work and get the land in order so that you can put them in at the very nick of time when they should be. As a general thing, we are apt, in this section, to plant ruta bagas rather too late when we design them for cattle feed. It is true that when planted early they become a little more tough or woody than we like to have them for the table, but they are just as good if not better for cattle, and we obtain more per acre.

We have found superphosphate of lime to be a good dressing for turnips and beets; and we have seen excellent effects on the same crop by the use of guano, and also by the use of bone dust.

For the Maine Farmer.

HOW TO KILL LICE ON CATTLE.

Mr. Editor:—When I asked the question what the medicine was, to be put into the quill for killing lice on cattle, I did not think that I should hit any of you, but as I did, I will say as the man said when he talked to the Governor not knowing who he was talking. When he found who he was, well, said he, if I had known that you were the Governor I would not have talked so. However, I don't now see how I can take it back.

For the benefit of your readers I will give my way of killing lice on cattle. I have practiced it for several years, and never have known it to fail when the operation is thoroughly performed: take common soft soap and sour butter-milk, mix it half and half, stir them thoroughly together, wash the cattle on all parts where the lice are likely to be. Do the work thoroughly, and you will get rid of them. In three or four days the nits will hatch out, then wash your cattle again, and you will get rid of the whole of them. I hope that some of your readers will try this mode, and let me know the result through the Maine Farmer.

C. C. DANIELS.

North Wilton, N. H., April 28, 1856.

MILK FROM A CALF. A heifer, two years old last April, the favorite of my two little boys, was milked by them, and noticing that she was "making bag," I commenced milking her the last of April, and continued it until August. She gave an average of seven quarts per day, for the last two months, and from six days' yield, we made three pounds of as nice butter as ever graced a table. On the 22d of September, she had her first calf, since which time she has given milk like other heifers in like circumstances.

A. BARTLETT.

Rural New Yorker.

For the Maine Farmer.

DAIRY DOINGS IN BIRCHDALE.

Mr. Editor:—It is a long, long time since I wrote you, so long I have almost forgotten when, but believe I wrote you in the spring of 1852, giving you an account of my humble efforts in dairying and farming for 1851.

In the spring of 1852, having become somewhat discouraged in trying to benefit my children by my own personal example of industry and frugality, (perhaps I may as well say, that my children, like Paddy's prize money, are in prospect,) I leased my farm and dairy, receiving one-half the produce, as rent. The farm and dairy were well managed by my tenant, but the season of 1852, by a long continuous drouth, which lasted from May till November, was one of the worst seasons for dairying I ever saw, not only drying up the feed, but reducing the hay to about half a crop, as well as lessening our crops of grain materially; and to add to our misfortune, the grasshoppers were as numerous as the locusts of Egypt, destroying almost every green thing. We sold our butter that season for twenty cents per pound, amounting to the small sum of \$1503.20, the produce of one dairy of fifty cows. Our sales for pork, which in part should be credited to the dairy, amounted to \$562. In the spring of 1853, my tenant continued to engage in a more profitable business than dairying, viz: the raising of babies, and I was obliged to return to farming again, with the addition of 48 acres of new land, which I had cleared in the season of 1852, to manage. I will here say that a 60 acre lot of good land, adjoining my farm, owned by a man in Massachusetts, had been in market for several years at \$400, and failing to convince my neighbors that the land was worth the price asked, I purchased it myself, and had 48 acres of it cleared, at nine dollars per acre, paying \$1.25 per cord for piling 125 cords of bark, which netted me \$1.42 per cord, above the expenses. After putting 20 acres of it into corn and beans, and the rest into oats and wheat, and viewing it with a neighbor of mine, after the grain was well up and looking finely, I made on paper an estimate of the quantity of grain anticipated, showing most conclusively that two crops of grain would not only defray the expenses in clearing the land, and putting in the crops, but the price paid for the land itself, leaving me the land not only cleared, fenced and seeded to grass, but a "pocket full of rocks," that, if it turned out as I expected, I should publish the account in the Farmer, showing the Kennebec boys that capital in Penobscot, at least, could be advantageously employed in farming. But alas! the "best laid plans of mice and men oft gang a-gley." The severe drouth of 1853 and '54 reduced my crops of grain nearly one half, not only spoiling the article intended for the Farmer, but rendering my estimates not unlike the pine timber estimates of 1855, much the best on paper. The season of 1853, in this vicinity, with a continuous drouth from spring to fall, proved more disastrous to grazing, and the grass crop, than 1852, and besides, the grasshoppers were more numerous and destructive in their depredations. We reduced our dairy to forty-two cows, and sold our butter for 20 cents per pound, amounting to \$1476 only. In the season of 1854 we reduced our dairy of cows to forty. The season of 1854 was severely dry from spring to fall, making three seasons in succession the hardest for grazing ever remembered by the "oldest inhabitant." We sold our butter this season for 25 cents per pound, amounting to the small sum of \$1458.27. We sold this season \$81 worth of poultry and eggs, and probably used as large an amount in our large family, it being the most profitable crop on the farm, subsiding, as they did, almost wholly on the legions of grasshoppers, that continued a severe scourge to us this season, also.

On the first of April, 1855, "failing to sell my farm and go west," I leased it with my dairy of forty-two cows and heifers, to a neighbor of mine, Mr. D., receiving one-half the produce for rent. We supplied three private families in Bangor with about 800 pounds of butter at 30 cents per pound. The rest of our butter we sold for 25 cents per pound at the Bangor House, where, if you do not find the best butter, you will find one of the best conducted public houses, and one of the most obliging landlords in the State.

Our sales the past year, besides what we used in our two families, amount to \$1907.74. Received for pork and pigs sold, \$330.20, besides \$200 worth sold for family use, which should in part be credited to the dairy. In justice to Mr. D., I will say, that two of his forty-two cows were two years old heifers, and four were three years old, none of which were equal to cows, and one of our best cows sickened and died last of August.

The season of 1855 was good for grazing, and for the grass crop, but owing to the severity of the drouth of 1852, '53 and '54, we obtained only about two-thirds of an average crop of hay, and our pastures suffered equally with our mowing, the clover being nearly all burnt out, leaving them thin, and the quality of the feed poor, on account of the absence of clover, which is decidedly the best feed for butter.

We planted six acres of corn, contrary to our usual practice, upon green sward. The corn came up well, but was soon attacked by a white cut worm, with a red head, about the size of the common black cut worm, but more active in its habits, known here as the "hop worm." We commenced a war of extermination, by pinching their heads, but soon learned, to our sorrow, that there "was more of the same sort left," and we commenced at once to fill up the missing hills with potatoes; but the worms continued to destroy the corn late in the season, too late even for potatoes to mature, and we sowed, at our last hoeing of the corn, one pound of English turnip seed, on one and a quarter acres of the corn ground, covering the seed with a hay rake. Mr. D. sowed the seed so thick when he commenced, and so thin when he left off, I thought his turnips a failure; but on harvesting them in the fall, we had 550 bushels, though the crop would have been better had the thickest been thinned out; some of them that grew a proper distance apart, were

the largest and handsomest I ever saw, eight of the largest filling a large bushel basket. On one end of our corn field the worms worked but little, and we got about 50 bushels of corn—our neighbors, who planted on green sward, lost their crop entirely, while those who planted on stubble ground, obtained very good corn.

We grew six and one-half acres of wheat on corn and potato ground, of an average yield of 30 bushels to the acre, yielding 40 pounds of nice flour when ground at the Dexter mill. The kind of wheat raised, is known as the "red seed." We sowed it late, the 27th of May, in order to avoid the weevil. The past season has been very good, in this vicinity, for wheat, oats, and other spring grain. Much more wheat was raised in this vicinity the past season, than has been raised for several years past, the high price of flour, for the two past years, has taught farmers a lesson I hope they will not forget for years to come. Can the farmers of Maine raise their own bread? is a question often asked. I answer, they can, and not only do that, but raise enough to bread the State. That a man with a large farm, a large stock of cattle, and a plenty of manure, can raise, not only his own bread, but quite a quantity to sell, is readily seen and admitted; but to the man with a sixty acre farm, and a small stock of cattle, raise his bread! I answer, yes; and now for the modus operandi.

If he has twenty acres of pasture, let him plow two and one-half acres of it in June, harrow and cross plow it in the fall, plow it again in the spring, sow it with five bushels of well cleaned red sea wheat, about the 25th of May, stocking down to grass with one peck of herds grass, and 12 pounds of clover seed, and he will get on an average 20 bushels of wheat to the acre, leaving 45 bushels of wheat, besides his seed, which, with a few bushels of corn, will bread his family; let him continue the system, which will keep five acres of his twenty acres of pasture under the plow, and I will guarantee him his fifteen acres of pasture, recently well seeded to grass, will afford him more and better feed than his twenty acres did while undisturbed by the plow.

I will further suppose that he will plant one acre of corn and two of potatoes, on which he will apply all the dressing he can make from his cattle, hogs and poultry; that may be sowed to wheat, yielding from 60 to 70 bushels, which he will have to sell to the non-producer, and so do his full share, though on a sixty acre farm, to bread the State. I intended, when writing on the culture of wheat on pasture land, to recommend the application of 20 or 30 bushels of unleached ashes to each acre, to be sown broadcast immediately after the wheat is harrowed in, paying half a dollar per bushel, at the present price of wheat, besides being worth more in promoting the growth of the clover than they will sell for to the soap boilers.

OLIVER BIRCHDALE.

Birchdale, Penobscot Co., April 7, 1856.

NOTE. We are right glad to hear from our old friend Birchdale once more. The valuable facts which he brings forward, and the quiet humor with which he tells his story, are always interesting to our readers, and have done much good. We are compelled by want of space to postpone the balance of this communication until next week.

[Ed.]

For the Maine Farmer.

QUERIES RESPECTING SUPERPHOSPHATE.

Mr. Editor:—Feeling an interest in the use of the superphosphate of lime, and wishing to be informed of its merits, as a fertilizer for plow land, or, rather, that which does not contain clay, and on which plaster has little or no effect, I take the liberty of asking you, or some of your patrons who have tried the article, to give the results of its use, through the Farmer.

We have several acres ploughed, on which the grass has been killed out by the severe drouth of the several past dry seasons, and as we have not manure to put on it we must seed it down again, this spring, to manage it advantageously. Could we get something like plaster, that we could find at a cheap rate, we should be much pleased to apply the same, and I doubt not that many of the readers of the Farmer would be much interested in any facts and results in regard to its use.

We have a clayey farm on which we use plaster, and land that has been in grass thirty years, without a particle of manure, with a biennial application of plaster, now yields a very good crop of hay, of the best quality,—the plaster paying, in my opinion, at least two to three hundred per cent. on its cost.

I notice, in my scrap-book, the experiment of Mr. Thos. Stanton, of No. Monmouth, with the superphosphate, which appeared in the Farmer, a year or two since. Now, if it is doing as well generally as it did in Mr. Stanton's case, the readers of the Farmer ought to be advised thereof,—and it would seem to be a source of wealth to the farmers. Statements of its cost, where the pure article could be obtained, the quantity to be sown per acre, &c., would be very much desired.

ALVIN HAYNES, 26.

Passadumkeag, April 9, 1856.

EFFECT OF WINTER ON OUR FRUIT TREES.

As far as we can learn, the fruit trees in Maine have sustained very little injury from the past winter. J. W. Carr, Esq., proprietor of North nursery in Bangor, writes us that his pear trees have passed the winter without injury, but plum trees are somewhat injured, especially small trees.

We have heard complaints in some sections that mice have done much damage to trees. The snow among us was not wet during the whole winter, consequently laid lightly, and allowed these vermin to burrow through it with ease, and they improved the occasion to girdle all the young trees that they found in their path.

BLACK WARTS ON PLUM TREES. MR. FREAS.—Last spring I found a plum tree nearly covered with black warts. I dug from the roots about a peck of earth, supplying its place with bone and horn shavings. The tree revived, and bore a crop of tolerable plums, and nearly all the warts have disappeared. Is not this apparent remedy worth a trial?

JOHN.

(Germanstown Telegraph.)

From the Prairie Farmer.

SPRING.

BY WM. H. STEVENS.

The winter winds have ceased to blow
In frosty, piercing gales,
No more the fleecy, spotless snow
Is spread o'er hills and dales,
For now the bright and glad Spring
Comes smiling on the scene,
And soon will give of merry bring,
And clothe the earth in green.

Let hoary winter pass away,
His chilly reign is o'er,
His snow-dread scenes in dread array,
Are now as scenes of yore;
His icy, unrelenting ways,
O'er earth's denuded form,
Has quitted beneath the sun's warm ray,
His rules no more the storm.

Hail, beautiful Spring, thou fairy queen,
We bid thee welcome, now
Come with thy robes of richest green,
Come with the daisies of the field,
And let thy balmy, healthful breath,
Thy sunshine and warm showers,
Again bring verdure to the heath
And lovely, fragrant flowers.

Bright, cheerful Spring, thou welcome guest,
'Tis well that thou art here,
For now the needy and distressed
May feel that help is near.
The bounteous earth beneath thy hand
Thy gifts will freely bring,
And all will now, throughout the land
Rejoice, that is Spring.

Marion Co., Ill., March 30th, 1856.

SHOULD ASHES BE MIXED WITH SUPERPHOSPHATE OF LIME?

In the Country Gentleman of Feb. 7, we stated that unleached wood ashes should not be mixed with superphosphate of lime. A correspondent of the Maine Farmer, cites a process for manufacturing superphosphate of lime given by Mr. Alexander J. Main, in the Transactions of the Highland and Agricultural Society of Scotland, in which he recommends "house ashes" for mixing with the superphosphate of lime; and as this is in his opinion diametrically opposed to our statement, he asks "Who is right?"

Our inquiring friend might have cited even higher authority for the use of ashes with superphosphate than Mr. Main. The lamented Prof. John P. Norton, Prof. Emmons, and many other American writers recommend farmers manufacturing superphosphate of lime from bones, to dry the mixture by the addition of ashes.

These writers evidently recommended the practice of British farmers without due consideration. It is true that in England "house ashes" are mixed with home-made superphosphate of lime in order to render it dry enough to be sown with the drill—and the practice is a good one. But "house ashes" are a very different article from the "unleached wood ashes" referred to by us. The "house ashes" of the English are coal ashes, and have no injurious action when mixed with guano, superphosphate, &c. Unleached wood ashes have a strong alkaline reaction, and will, as we before stated, most unquestionably "set free the ammonia from its acid combinations," in these and all other manures.

Any one can readily satisfy himself on this point by mixing a little Peruvian guano with unleached wood ashes and adding a little water. He will soon produce a strong smell of ammonia (hartshorn) and this simple experiment will do more to convince him of the truth of our assertion than the most elaborate argument. We hope the correspondent of the Maine Farmer will satisfy himself on this point.

That "unleached wood ashes" when mixed with superphosphate of lime has an injurious effect cannot for one moment be doubted by any one having any knowledge of chemical action. The object of mixing sulphuric acid with bones, or as it is erroneously called "dissolving" bones with sulphuric acid, is to convert the insoluble phosphate of lime as it exists in bones into the soluble superphosphate of lime. The sulphuric acid accomplishes this by taking away a portion of the lime, leaving an excess of phosphoric acid. Superphosphate of lime is phosphate of lime and phosphoric acid. The former alone is insoluble, but the two combined are quite soluble and readily available for the use of plants. Now then, suppose we add "unleached wood ashes" to a mixture of phosphate of lime and phosphoric acid—in other words to superphosphate of lime—what is the effect? The potash and soda of the ashes unite with the excess of phosphoric acid, and leave the phosphate of lime in its insoluble condition. And thus we undo what has been done at considerable expense. If we add lime the same effect is produced with this difference that the whole of the phosphoric acid in the mixture combines with lime—the original insoluble phosphate of lime being formed. So that lime is even worse than unleached wood ashes, but neither should ever be mixed with superphosphate of lime.

With commercial superphosphate of lime, or with superphosphate of lime made from animal charcoal, burnt bones, &c., there is no necessity for mixing anything at all. Drill it in with the seed just as it is. Superphosphate of lime made from fresh bones, is, necessarily, so moist that some absorbent material must be mixed with it before it can be sown with a drill; and it is for this reason that British farmers mix coal ashes with it. Any dry material, that has not an alkaline reaction, such as charcoal dust, dried peat, burnt clay, &c., may be used. Burnt clay is, perhaps, more extensively used in many parts of England for this purpose than any other substance.

J. H.

[Country Gentleman.]

EXPERIMENT IN CORN GRINDING. Last spring, happening to run out of seed for the ground I had prepared for potatoes, I concluded to finish it with corn planted in the same way, say 25 feet across and 8 inches in the row. The corn was worked nearly the same as the potatoes, and yielded well, and by a greater number of stalks than by the usual way of planting, I had at least one-third more corn and double the fodder. On a large scale I suppose corn planted so close would not ear for want of sun and air; but I have never tried it. I should like to hear from those having experience in this mode of culture. (Germanstown Telegraph.)

WHEAT CULTURE IN MAINE.

Mr. Editor:—Much has been said against this State as a wheat growing State, and the idea is becoming quite prevalent among many farmers that wheat cannot be profitably cultivated here. The farmers here contend that a very tenacious soil is required for the production of this grain, and consequently you see but very little wheat growing on light loams. Now that a tenacious soil is not best adapted to the cultivation of this grain I will not dispute, but that it cannot be successfully grown on light soils, I will attempt to dispute, for on such soils I experimented the past season with good results. Two years ago I purchased a farm which consisted mostly of what was called by the neighbors *weak land*, and had been under the scientific culture of an old sea captain for twenty years previous to my purchase. The land was completely worn out and exhausted from the fact that it never had been half cultivated. The land was very light but not sandy, and the captain said he could grow anything but wheat, and that he would not pay in this State. The first year I put in a piece of wheat with very poor success, raising eight bushels from near an acre. The second year I had two acres of old ground which had never been manured. On this I carted near one hundred cartloads of swamp muck in the fall, distributing it in small heaps over the field. In the spring I spread it and plowed it in and sowed wheat. The spring was cold and backward, and from some cause it did not germinate. After it came up I sowed on twenty bushels of refuse lime and as many more of ashes, the effect of which was soon perceivable. When it was ready to harvest, some of the straw was more than five feet high. I reaped it, and it thrashed out forty bushels, at the rate of twenty bushels to the acre. I think all light soils can be renovated by applying muck, ashes, and lime, so that wheat, as well as other grains, will grow. [J. M., in New England Farmer.]

CURRENT BUSHES.

Any one can raise a current bush, but the thing is to produce a fine bush. Take young sprouts—last year's growth—and remove the eyes from the lower portion of the shoot for about eight inches, which will prevent suckers being thrown up from the roots. Plant in spring or autumn in rich ground. As the roots of the current do not extend themselves far in search of food, they should be well supplied yearly with rotten manure, dug in with a hoe. The bush should not be allowed to form a thick head, but be kept open. The last year's wood should be cut back four or five inches every spring according to extent of growth.

The culture of this excellent fruit is usually much neglected, even in the best gardens. It seems to be the general belief that a current bush can thrive and produce fruit in any situation and without culture. It will live and bear an apology for fruit, but it is nearly all skin and seeds and citric acid. Those who have once seen and tasted the produce of bushes, properly cultivated, will be surprised at the richness and perfection of flavor which this fruit may be made to attain. Plant eight feet apart, treat well, and for twenty years your table may be supplied with this cheap and healthful luxury, costing you really nothing at all.

[Prairie Farmer.]

PEAS SHOULD BE PLANTED DEEP.

In the culture of peas one old routine is almost invariably practiced, viz: Plant them about two inches under ground, in drills, and as they grow, draw earth up to them, so that when they come into bearing and just when they require the most nourishment, moisture, &c., they get the least, for all showers of rain, by means of the drills, run rapidly off the ground, and the sun has more effect in drying rapidly after rains; to these add the fact that a shallow planting, and so drawing up earth afterward, nearly all the roots are near the surface; hence, early maturity, and as early decay. Experiments in planting four years, at different depths, have shown that the pea will grow freely in good, mellow, loamy soil, at a depth of one foot; but at the same time, we would recommend planting in general of soils, at say, six to eight inches deep; by so doing, your peas will come as early as when planted only two inches deep—will grow stronger, produce more, and continue longer. (Ohio Farmer.)

THE MILLER CROP. A writer in the Ohio Farmer, from Duncan's Falls, O., recommending millet as feed for stock, has the following paragraphs:

"On the 15th of May last, I sowed four bushels of millet seed on 12 acres of ground; the soil a rich sandy loam. It was sowed on the first of August, and averaged three large wagon loads to the acre—certainly equal to three tons to the acre; every load was as much as two good sized yoke of cattle could pull.

"I measured several stalks over six feet high, and I think the whole field would average five feet. My horses, colts, cows and calves, have been fed with it all winter thus far, and when there is good timothy hay in the rack with it, they will pick out all the millet hay first, and very seldom touch the timothy hay at all. I have not fed any of it to sheep, and therefore cannot say how it would suit them.

"Millet produces a great quantity of seed, and the stock seem very fond of it. I think it would make excellent oat feed, to mix with shorts, and corn and cob-meal, for milk cows."

SWALLOWS. As a proof of the very valuable services rendered by swallows, it is estimated that one of these birds will destroy, at a low calculation, 900 insects per day; and when it is considered that some insects produce as many as nine generations in a summer, the state of things but for these birds, may be readily conceived.

CROP OF OHIO. The wheat crop of Ohio for the past year has been estimated by the Secretary of State at thirty millions of bushels, and the corn crop at eighty millions. The State of Ohio yields full one-eighth of all the corn that was produced in the United States, and the wheat crop was more than one-fifth of the aggregate of the Union.

WALDO AGRICULTURAL SOCIETY.

LIST OF PREMIUMS.

The Trustees of the Waldo Agricultural Society met at the Court House in Belfast, on Saturday, March 1, 1856, and adopted the list of premiums of last year, with the following amendments:—The premiums awarded on horse teams for ploughing stricken out.

	Premiums of	\$3, \$2 and \$1
Wheat,	2 and 1	
Rye,	4, 3, 2 and 1	
Indian Corn,	2 and 1	
Peas,	4, 3, 2 and 1	
Potatoes,	2 and 1	
Carrots,	2 and 1	
Ruta Baga,	3, 2 and 1	
Squashes,	2, 1 and 1	
Garden Vegetables,	2 and 1	
Milk Cows,	3, 2 and 1	
Bulls,	4, 3, 2 and 1	
Working Oxen, (not less than six years old.)	4, 3, 2 and 1	
Best team, (not less than 8 yokes.)	5, 6, 4 and 2	
Five years old steers,	2 and 1	
Oxen,	2 and 1	
Best pair, (including horses & sheep)	4, 3, 2 and 1	
Best pair of matched horses,	3 and 2	
Best single carriage "	2 and 1	
Best stallions,	4, 3 and 2	
Best three years old colts,	3, 2 and 1	
Best two years old colts,	3, 2 and 1	

